CLAIMS

What is claimed is:

1. A device for cutting a strip of tissue of approximate width W from a mass of tissue, said device comprising:

an elongate cutting tube having a distal end and a lumen that opens through an opening in the distal end;

first and second cutting edges being formed on generally opposite edges of the distal end of the cutting tube said first and second cutting edges being separated by a distance D;

said cutting tube being advanceable through tissue such that the first and second cutting edges will cut a strip of tissue having approximate width W, said approximate width W being approximately equal to the distance D between the first and second cutting edges.

2. A device according to Claim 1 wherein the cutting tube comprises a stainless steel hypodermic tubing.

3. A device according to Claim 1 further comprising at least one protruding tip formed on the distal end of the cutting tube.

4. A device according to Claim 2 wherein the protruding tip is tapered.

5. A device according to Claim 2 wherein the protruding tip is sufficiently blunt to be substantially a traumatic.

6. A device according to Claim 1 wherein the first and second cutting edges are located on opposite lateral sides of the distal end of the cutting tube.

7. A device according to Claim 4 wherein the first and second cutting edges are located on opposite lateral sides of the distal end of the cutting tube and the protruding tip is located on the bottom of the distal end of the cutting tube.

8. A device according to Claim 7 further comprising a blunt edge located at the top of the distal end of the cutting tube.

9. A device according to Claim 1 wherein there is a single bend or curve formed in the cutting tube.

10. A device according to Claim 9 wherein there is a single bend of approximately 20 degrees to approximately 90 degrees formed in the cutting tube.

11. A device according to Claim 10 wherein the bend is approximately 90 degrees.

12. A device according to Claim 1 wherein there are a plurality of bends or curves formed in the cutting tube.

13. A device according to Claim 12 wherein there are a plurality of bends of approximately 20 degrees to approximately 90 degrees each formed in the cutting tube.

14. A device according to Claim 12 wherein there is a first bend of approximately 90 degrees and a second bend of approximately 90 degrees, formed in the tube.

15. A device according to Claim 1 further comprising a source of negative pressure connected to the lumen of the cutting tube so as to aspirate fluid or matter through the lumen of the tube.

16. A device according to Claim 1 wherein the device further comprises a second lumen.

17. A device according to Claim 16 wherein one of the lumens is connected to a source of fluid such that fluid may be infused therethrough and the other of said lumens is connected to a source of negative pressure such that fluid or matter may be aspirated therethrough.

18. A device according to Claim 1 wherein at least one of the cutting edges is heated such that it will cauterize as it cuts.

19. A device according to Claim 1 further comprising apparatus for severing the strip of tissue when the strip of tissue has reached a desired length.

20. A device according to Claim 19 wherein the apparatus for severing the strip of tissue comprises at least one electrode which, when energized, will sever the strip of tissue.

21. A device according to Claim 1 wherein the device further comprises:

a second tube that has a lumen and a distal end;

wherein the cutting tube extends through the lumen of the outer tube with a distal portion of the cutting tube extending out of and beyond the distal end of the outer tube.

22. A device according to Claim 21 wherein:

the outer diameter of the cutting tube is smaller than the inner diameter of the second tube such that fluid may flow through the lumen of the second tube; and

at least one aperture is formed in the second tube to permit fluid to pass into or out of the lumen of the second tube.

23. A method for cutting a strip of tissue of width W from a tissue mass, said method comprising the steps of:

A) providing a device which comprises;

i. an elongate cutting tube that has a distal end and a lumen that opens through an opening in the distal end; and

ii. first and second cutting edges formed on generally opposite edges of the distal end of the cutting tube, said first and second cutting edges being separated by a distance D that is approximately equal to the width W of the strip of tissue to be cut; and

B) advancing the distal end of the cutting tube through the mass of tissue such that the first and second cutting edges cut a strip of tissue of approximate width W.

24. A method according to Claim 23 wherein the mass of tissue is *in vivo*.

25. A method according to Claim 23 wherein the mass of tissue is *in vitro*.

26. A method according to Claim 23 wherein the mass of tissue is located within the body of a human or animal subject.

27. A method according to Claim 26 wherein the strip of tissue is removed for a diagnostic or therapeutic purpose.

28. A method according to Claim 27 wherein the subject suffers from glaucoma and wherein the method is carried out to remove a strip of trabecular meshwork from an eye of the subject to facilitate drainage of aqueous humor from the eye thereby lowering intraocular pressure.

29. A method according to Claim 28 wherein Step B comprises:

inserting the device into the anterior chamber of the eye;

positioning the distal end of the cutting tube adjacent to or within the trabecular meshwork of the eye; and

advancing the cutting tube such that the cutting edges cut a strip of approximate width W from the trabecular meshwork.

30. A method according to Claim 29 wherein the device provided in Step A of the method further comprises a protruding tip and wherein the protruding tip is advanced through the trabecular meshwork and into Schlemm's Canal and, thereafter, the protruding tip is advanced through Schlemm's Canal as the cutting tube is advanced to cut the strip of tissue.

31. A method according to Claim 23 wherein the device provided in Step A further comprises apparatus for severing the strip of tissue after the strip of tissue has reached a desired length and wherein the method further comprises the step of:

C) severing the strip of tissue after the strip of tissue has reached a desired length.

32. A method according to Claim 23 wherein the method is carried out to form an incision in skin, mucous membrane, an organ, a tumor or other anatomical structure.

33. A method according to Claim 23 further comprising the step of:

C) removing the strip of tissue through the lumen of the cutting tube.

34. A method according to Claim 33 wherein the lumen of the cutting tube is attached to a source of negative pressure to aspirate the strip of tissue through the lumen of the cutting tube.

35. A method according to Claim 23 wherein the device provided in Step A further comprises a second lumen and wherein the method further comprises:

infusing a fluid through one of said lumens; and

aspirating fluid and/or matter through the other of said lumens.